

## ABSTRACT OF THE DISCLOSURE

A rotary actuator has a synchronous motor and an internally meshing planetary reduction gear having a first shaft rotated by the synchronous motor, an outer gear mounted to said first shaft with an eccentric part so as to be eccentrically rotatable around said first shaft, an inner gear with which said outer gear meshes internally, and a second shaft connected to said outer gear with a transmission means that only transmits said outer gear rotation on its axis to the second shaft. The synchronous motor and the internally meshing planetary reduction gear are accommodated inside a housing, and the first shaft doubles as a rotor shaft of the synchronous motor. An incremental encoder provided along a rotary shaft of the synchronous motor detects the rotation angle of a rotor of the synchronous motor.